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ning the destruction of all religion, and morality, and whose greatest error was in forgetting his vocation, and in attaching too much importance to particular opinions on subjects, concerning which the most important of all sentiments, is the love of peace.*

DISCOVERIES AND IMPROVEMENTS IN ARTS, MANUFACTURES, &c.

Patent of Messrs. Phillip Londen, sen. and jun. of Chelsea, for new and improved methods of manufacturing Muriate of Soda, or common salt, dated April, 1809.

THE specification of this patent states the new method of manufacturing sea salt, to consist in purifying rock salt, or that obtained from brine springs, sea water, &c. by fusion and calcination; and by the application of soda, its nitrate, sulphate, or carbonate, or any other of its combinations; potash, volatile alkali, lime, or their sulphates, nitrates, carbonates, or their other combinations; or by the addition of any other material or re-agents, that will effect the decomposition, precipitation, or separation of the whole or part of the earths and metals, or earthy or metallic salts, combined with the muriate of soda; which re-agents, or any of them, we apply, at any part of the processes hereafter mentioned, as circumstances may require.

The sea salt, with the necessary re-agents and materials, is to be put into a reverboratory furnace, or into any suitable vessel, and brought to a state of fusion, and kept so for a sufficient time, so that the earthy and metallic parts may be precipitated, or separated. The salt is then drawn off into proper vessels as long as it continues to come off fit and clear (or it may remain in the furnace to cool) leaving the sediment of the precipitated, earthy, and metallic matter, with some muriate of Soda. Afterwards the salt, so purified, may be broken into grains for common use. This process may be managed so as to produce salt of any inferior degree of purity, by properly regulating the heat. The salt remaining, with the impure residue, may be recovered by solution and evaporation; or where less purity is required, calcination alone may be employed, and the salt afterwards be farther refined by solution and evaporation.

The salt refined in this manner, the patentee asserts, will be purer, and more fit for curing fish and provisions, and for common use, than any small salt at present manufactured; and that its use may supercede the necessity of importing any foreign bay salt altogether.

Observations. The specification of this patent is an instance of obscurity, either effected for the unjust purpose of concealing the process, or ignorantly incurred by attempting to monopolize every possible method of applying it. Patentees, by attempts, such as this, at steering along the very utmost limits of law, frequently defeat their designs, and shipwreck their patents where they least expect it. If any of the substances mentioned to be mixed with it, can be of any use in the purification of salt by calcination, or improve its quality, it is evident to any person in the least acquainted with chemistry, that they cannot all be so, being of such different natures, and that all that are not so, are inserted either from ignorance, or for concealment.

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* Had such timid counsels prevailed with the reformers of the various ages, the work of reformation and of approximation towards truth, would not have advanced; and an error once adopted would never be eradicated. In metaphysical and theological investigations much may remain to elude the strictest research; but many advances may be made in this knowledge if mankind were as much engaged in the discovery of religious, as other truth. They who would not trust another to make a bargain for them by which their pecuniary interests might be endangered, will yet confide implicitly in the opinion of others in religion; and, adopting a traditionary belief, surrender our noble privilege to examine. Cuvier through the entire of this sketch, so interesting, and truly liberal, in other respects adopts the plan, of submiting to authority in matters of religion.

B.M.M.

Sulphate of lime, for instance, one of the substances above stated, by a process very similar, in which heat alone is used, contrived by an eminent German chemist, named Funcke, produces sulphate of soda from sea-salt combined with it, and would probably have the same effect in Mr. Londen's method, instead of that he proposes: most of the other sulphates mentioned by him would most likely have the same effect; and if any of them did so, it would form a formidable ground for the invalidation of the patent, on the same principle as that, on which Mr. Turner's patent for his yellow pigment (muriate of lead) was set aside.

The nitrates directed would be of use in accelerating the calcination of the metallic substances united to the salt, but would cost too much for any profitable application. The addition of soda is objectionable on the last ground, even if it could be of any use; on the contrary, its probable effect would be to weaken the salt, by depriving it of some of its muriatic acid. Indeed the whole process is calculated to have this latter effect; wherefore Mr. Londen's salt, instead of being stronger and better than bay salt, probably would be considerably inferior to it, since it is well known that the circumstance which gives bay salt its superiority, in preserving fish and provisions, over common pan-salt, is the greater proportion of muriatic acid it contains; which is usually attributed to its not having been exposed to any heat above that which the action of the sun is capable of giving to sea water; which heat is not sufficient to separate any part of the muriatic acid from its combination with the soda in the sea salt. When the heat of boiling water in the pans is found to have so great an effect in injuring the quality of the salt, it is fair to conclude that the power of the very high temperature of calcination in this respect would be much greater.

Patent of Mr. Cobb, junr. of Banbury Oxfordshire, for improvements in the art of making Paper, dated December 1807.

In Mr. Cobb's method of making paper the pulp runs out of a large vat, in which it is prepared into a smaller one by a cock, or otherway, for the immediate purpose of manufacture, two cylindrical agitators are placed horizontally in the large vat, and one in the small one, to keep the pulp duly suspended; and on one side of the smaller vat the pulp is permitted to flow out through regulated apertures into a small trough, where its motion is checked by an inclined plane or sloped piece, from which the pulp flows over another inclined surface into a paper mould, which is moved forward by an endless web passing over rollers placed at the two ends of a horizontal frame; which frame is kept in a state of rapid agitation back and forwards, during the working of the machinery, by a crank and a re-acting spring, or other means. When the mould has passed to the end of the first endless web, it is received by another moving over-fixed rollers, towards the termination of its passage above which it encounters an endless web of felt, whose plane of direction downwards is in an angle of about 20 degrees to that of the first web, and which in the same manner passes over rollers, the lowest of which is pressed into close contact with the paper mould, by another roller placed beneath the web which sustains the mould. By this means the sheet of pulp loses some of its moisture and adheres to the felt web, which brings it upwards along a slope of about 45 degrees, till it is on a level with the highest roller, and then passing on horizontally draws it between one, or more pairs of rollers, whose action renders the sheet sufficiently firm to be taken off by a workman standing at the upper roller, who lays it in the usual manner. The paper mould, after the soft sheet is taken from it by the felt web,